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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,075	05/12/2005	Jean-Christopher Duclos	072691-015	7598

33401 7590 09/29/2010

MCDERMOTT WILL & EMERY LLP
2049 CENTURY PARK EAST
38th Floor
LOS ANGELES, CA 90067-3208

EXAMINER	
PLUMMER, ELIZABETH A	

ART UNIT	PAPER NUMBER
3635	

NOTIFICATION DATE	DELIVERY MODE
09/29/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto33401@mwe.com

Office Action Summary	Application No.	Applicant(s)	
	10/522,075	DUCLOS ET AL.	
	Examiner	Art Unit	
	ELIZABETH A. PLUMMER	3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,13 and 17-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,13 and 17-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's amendments and arguments received 07/06/2010 have been entered and considered. Claims 2-4, 6-12 and 14-16 have been canceled. Claims 17-26 have been added. An examination of pending claims 1, 5, 13 and 17-26 is herein presented.

It is noted that the amendment is technically non-compliant. When making an amendment to a claim, the text of any deleted matter must be shown by strike-through except that *double brackets* placed before and after the deleted characters may be used to show deletion of *five or fewer* consecutive characters. However, in this instant case it is clear what the applicant intended, so the amendment is being considered in order to further to prosecution.

Election/Restrictions

1. Newly submitted claims 19, 20, 22, and 23, are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: original claim 7 was drawn to having attachment screws for fixing the spacer to the inner layer. Newly submitted claims 19 and 20 have the spacer being welded to the inner layer. Similarly, claims 22 and 23 is drawn to only one having only one screw attaching the inner plate and outer plate.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 19 and 20 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 13, 18, 21 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Ladika et al. (US Patent 5,663,520).

a. Regarding claim 1, Ladika et al. disclose a sandwich structure (Fig. 8) for protecting a fixed or mobile installation or equipment, said sandwich structure comprising: an outer plate (114) made of a first ductile material (sheet metal), the outer plate capable of resisting the first impact of projectiles and absorbing a part of the kinetic energy of the projectiles, and an inner layer made of a second hard material (60) (steel armor plate) which is harder and less ductile than said first ductile material, and which is capable of stopping projectiles that passed through the outer plate while having had said part of the kinetic energy absorbed, spacers (246) for disposing the outer plate at a distance from the inner layer (Fig. 8) so that no part of the outer plate has any contact with the inner layer, and fixing means (248,254) for detachably fixing the outer plate to the inner layer at the location of the spacers.

b. Regarding claim 13, the outer plate has an entirely flat shape (Fig. 8).

c. Regarding claim 18, each spacer has a tubular shape (Fig. 8).

d. Regarding claim 21, the fixing means include screws (254,248), the outer plate and inner layers have holes for the passage of the screws (Fig. 8), and each spacer is provided with a threaded bore, the outer plate and the inner layer being fixed to the spacer by a corresponding screw having passed through a hole of the outer plate and the inner layer, respectively, and being screwed into the threaded bore of the spacer (Fig. 8).

e. Regarding claim 24, the outer plate has holes for the passage of the fixing means therethough (Fig. 8), and at least some of the holes loosely receive said fixing means which allows differential expansion of the outer plate and inner layer when the temperature changes.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 5 and 13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US Patent 5,471,905) in view of Ladika et al. (US Patent 5,663,520).

a. Regarding claim 1, Martin discloses a sandwich structure for protecting a fixed or mobile installation or equipment, said sandwich structure comprising an outer plate (110), the outer plate made of a first ductile material (abstract; column 3, lines 45-48) and designed to resist first impacts of projectiles and absorb a part of the kinetic energy of the projectiles, the outer plate having a full surface

(Fig. 1) and a constant thickness over all of said full surface (Fig. 1), an inner layer (120) made from a second hard material (column 2, lines 38-44) to stop projectiles that passed through the outer plate while having had said part of the kinetic energy absorbed (column 2, lines 56-60), spacers (130) for disposing the outer plates at a distance from the inner layer (Fig. 1), so that no part of the outer plate has any contact with the inner layer (Fig. 1), and fixing means (132,134) for fixing the outer plate to the inner layer at the location of the spacers. Martin does not disclose that the second material is harder and less ductile than the first ductile material and that the fixing means are for detachably fixing the outer plate to the inner layer. However, it is well known in the art that different materials can be used. For example, Ladika et al. teaches two different materials, a sheet metal (114) and steel armor (60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to try the two different materials taught by Ladika et al. in order to save on manufacturing costs. *Furthermore*, it would have been a matter of obvious design choice to form outer and inner plates out of different materials, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. Also, while Martin does not disclose that the fixing means are for detachably fixing the outer plate to the inner layer, Ladika et al. teaches a datable fixing means (Fig. 8) in order to be able to replace just the broken plate or layer. It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Martin to use a detachable fixing means, such as taught by Ladika et al., in order to make repairs easier.

b. Regarding claim 5, Martin in view of Ladika et al. discloses the invention as claimed except to the inner layer comprising steel and the outer plate comprising aluminum. However, it would have been a matter of obvious design choice to form the inner layer out of steel and the outer layer out of aluminum, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

c. Regarding claim 13, the outer plate has an entirely flat shape (Fig. 1).

6. Claims 1, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lanz (EP 1182420A1).

a. Regarding claim 1, Lanz discloses a sandwich structure (Fig. 1, 2a) for protecting a fixed or mobile installation or equipment, said sandwich structure comprising an outer plate (2) the outer plate made of a first ductile material (paragraphs 21,22,23) and designed to resist first impacts of projectiles and absorb a part of the kinetic energy of the projectiles, the outer plate having a full surface (Fig. 3a,4) and a constant thickness over all said full surface (Fig. 3), an inner layer (1) made from a second hard material to stop projectiles that passed through the outer plate (paragraphs 1,2,3) while having said part of the kinetic energy absorbed, spacers (9,6) for disposing the outer plates at a distance from the inner layer (Fig. 3a,4), so that no part of the outer plate has any contact with

the inner layer (Fig. 3a,4), and fixing means (8, 10, 12) for detachably fixing the outer plate to the inner layer at the location of the spacers. Lanz does not disclose that the second material is harder and less ductile than the first ductile material. However, it is well known in the art that different materials can be used. For example, Ladika et al. teaches two different materials, a sheet metal (114) and steel armor (60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to try the two different materials taught by Ladika et al. in order to save on manufacturing costs. Furthermore, it would have been a matter of obvious design choice to form outer and inner plates out of different materials, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

b. Regarding claim 25, Lanz discloses the structure further comprising conducting elements (13) separate from the outer plate (separate rib), said conducting element being fixed to said outer plate and extending between the outer plate (2) and inner layer (1) to provide electrical continuity between the outer plate and inner layer. Lanz does not disclose that each conducting element has a bore and attachment screws are disposed in said bores at a distance from the inner layer for detachably fixing the conducting elements to said outer plate and the conducting elements are detachably fixed. However, it is well known in the art to make different sections of a product out of multiple parts, as making the parts separable would allow the conducting element to be changed if damaged.

In re Dulberg, 129 USPQ 348. Furthermore, it is well known in the art that separable sections can be attached by bores with attachment screws disposed in said bores at a distance from the inner layer for fixing the element to the outer plate. For example, Ladika et al. teaches an outer plate (46) and inner layer (144) wherein a separate element (246,264) is attached via a bore with attachment screws disposed in said bores at a distance from the inner layer for fixing the element to the outer plate (Fig. 3,8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the elements using a bore with attachment screws disposed in said bores at a distance from the inner layer for fixing the element to the outer plate, such as taught by Ladika et al., in order to make the element separable and removable.

c. Regarding claim 26, the elements are flexible enough to enable differential dilatations between the outer plate and inner layer (paragraph 14).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ladika et al. (US Patent 5,663,520).

Regarding claim 17, Ladika et al. discloses an elastic element (264) inserted between the spacer and inner plate. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ladika et al. to place the elastic element between the spacer and outer plate, as this would have been a mere rearrangement of parts.

Response to Arguments

8. Applicant's arguments filed 07/06/2010 have been fully considered but they are not persuasive. Applicant's first argument is that aluminium is not used in the sandwich structure of Ladika. However, claim 1 makes no mention of aluminum. The only claim that has this limitation is claim 5, and claim 5 was not rejected under Ladika. This argument is therefore entirely moot and irrelevant. Regarding applicants arguments concerning the nomenclature of inner vs. outer plate, applicant claims a sandwich structure, not a combination wherein the sandwich structure is applied to something. Having an inner vs. outer plate would merely depend on orientation. In addition, all of the materials are inherently designed to absorb part of the kinetic energy of a projectile, as when a projectile passes through the materials there would be friction. Regarding Ladika not disclosing a spacer, a spacer can extend along a length; spacers are not limited to be at only discrete point as set forth in the claims. Regarding applicant's arguments with respect to Lanz, as noted in the rejections above, the choice of materials is considered to be an obvious design choice to one of ordinary skill in the art. Applicant has submitted no arguments about why this is not true.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH A. PLUMMER whose telephone number is (571)272-2246. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on (571) 272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeanette E Chapman/
Primary Examiner, Art Unit 3633

/E. A. P./

Examiner, Art Unit 3635